

CLAIMS

What is claimed is:

- 1 1. A connector comprising:
2 a hollow member having an open first end and an open second end joined
3 by a bore extending through said hollow member having a first bore section and
4 a second bore section that is stepwise reduced from said first bore section creating
5 an annular shoulder therebetween, said first bore section tapering inwardly from
6 said shoulder toward a third bore section;
7 a sealing member receiver integrally formed into the connector and
8 located within said second bore section near said third bore section; and
9 a sealing member seated within said sealing member receiver and at least
10 partially protruding inwardly into said second bore section.
- 1 2. The connector of claim 1 further comprising at least one retaining assembly
2 located on one end of said hollow member.
- 1 3. The connector of claim 2, wherein said retaining assembly is a barbed-type
2 retaining assembly formed on said hollow member adjacent said second end of
3 said bore.
- 1 4. The connector of claim 3 further comprising a sealing member receiver formed
2 on said barbed retainer; and
3 a second sealing member seated within said sealing member receiver on
4 said barbed retainer, said second sealing member extending at least partially
5 radially outward of said barbed retainer to effect a sealing relationship with a
6 conduit.
- 1 5. The connector of claim 4, wherein at least a portion of said barbed retainer is
2 formed without a parting line.

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- 1 6. The connector of claim 2, wherein said retaining assembly is a latch-type
2 assembly including a retaining clip biased toward a lock position.
- 1 7. The connector of claim 1, wherein said hollow member is configured as an in-line
2 connection with said first open end and said second open end lying on a common
3 axis.
- 1 8. The connector of claim 1, wherein said hollow member has an elbow
2 configuration with a bend between said first open end and said second open end.
- 1 9. The connector of claim 7 further comprising a flange extending partially into said
2 bore extending between a first corner of said bend to a second corner of said
3 bend, whereby said flange prevents over insertion of conduit.
- 1 10. A connector comprising:
2 a hollow member having a first open end and a second open end joined
3 by a bore;
4 said hollow member defining a sealing member receiver housing an
5 integrally assembled sealing member, wherein said sealing member receiver is
6 adapted to load said sealing member such that a portion of said sealing member
7 protrudes into said bore; and
8 at least one conduit retaining assembly located at one of said ends.
- 1 11. The connector of claim 9, wherein said receiver includes a concave recess formed
2 in said member having opposing surfaces between which said sealing member is
3 seated.
- 1 12. The connector of claim 9, wherein said bore opens radially outward adjacent one
2 side of said sealing member defining a clearance for removal of an insert
3 assembly during formation of said connector.

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- 1 13. The connector of claim 11, wherein said hollow member has a surface adjacent
2 said sealing member extending axially toward said first open end and radially
3 outward to define a frustoconical bore section adjacent said sealing member.
- 1 14. The connector of claim 12 further comprising a cylindrical bore section adjacent
2 said frustoconical bore section stepped radially outward by a shoulder separating
3 said sections, said cylindrical bore section opening at said first open end.
- 1 15. The connector of claim 13 further comprising generally cylindrical third bore
2 section stepped radially inward by an annular flange inward from said
3 frustoconical portion to an extent less than the protrusion of said sealing member
4 into said bore.
- 1 16. The connector of claim 14 further comprising a barbed conduit retaining assembly
2 having a plurality of barbs formed on said hollow member assembly adjacent said
3 second end;
4 said barbed retaining assembly defining a second sealing member receiver
5 located on an exterior of said hollow member adjacent one of said barbs;
6 a sealing member carried by said second sealing member retainer;
7 wherein said second sealing member is adapted to protrude radially
8 outward of said barbs.
- 1 17. A method of manufacturing a connector comprising:
2 providing a mold that defines a cavity, providing an insert assembly
3 located within said cavity, and providing a sealing member within said mold
4 contacting said insert assembly and partially exposed to said cavity;
5 compressing said sealing member such that the contact between said insert
6 assembly and sealing member is maintained as the connector is molded; and
7 providing molten plastic material into said mold cavity to form the

FOOTNOTES

8 connector.

1 18. The method of claim 17, wherein compressing said sealing member includes
2 mounting said sealing member on a pin assembly slidably received by said insert
3 assembly, and driving said pin assembly toward said insert assembly such that
4 said sealing member is compressed between a portion of said pin assembly and
5 said insert assembly.

1 19. The method of claim 18, further comprising the step of biasing said pin assembly
2 is biased away from said insert assembly, overcoming said bias to compress said
3 sealing member;

4 releasing said pin assembly after the connector is formed such that said
5 pin assembly moves away from said insert assembly; and

6 subsequent to said pin assembly moving away from said insert assembly
7 ejecting the connector from said mold.

1 20. The method of claim 17, wherein said mold includes a first mold portion, a
2 second mold portion, and a third mold portion having a mandrel extending
3 therefrom into the mold cavity;

4 inserting said mandrel as the mold is closed to compress said sealing
5 member by bearing on said pin assembly;

6 opening the mold after forming the connector by retracting the mandrel,
7 then opening said first and second mold portions, and pushing the connector off
8 the insert assembly.

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